AMENDMENTS TO THE CLAIMS:

Claims 1-31. (Previously canceled).

Claim 32 (Currently amended): An ionic liquid comprising an anion and a cation characterized in that the cation is a ~~secondary or~~ tertiary nitrogen-containing cation of the formula (I)

$$N^{+}HRR'R'' \qquad (I)$$

wherein:

R is an alkyl group substituted with one or more hydroxy groups ~~a hydrocarbyl group substituted with one or more substituents selected from the group consisting of nitrile, nitro, amino, or other nitrogen-containing functional group; thiol; alkylthio; sulphonyl; thiocyanate; isothiocyanate; azido; hydrazine; halogen; alkyl optionally having one or more ether or thioether linkages; alkoxy; alkenyl; hydroxyl; carbonyl; carboxyl; boronate; silyl; and substituted amino~~;

R' and R" are independently alkyl or substituted alkyl groups optionally substituted with one or more substituents selected from the group consisting of a nitrogen-containing functional group, an alkoxy group, and a hydroxy group; the nitrogen-containing functional group selected from the group consisting of nitrile, nitro, and amino; the substituted alkyl comprising one or more ether linkages;

~~R' is a hydrocarbyl optionally substituted with one or more substituents selected from the group consisting of nitrile, nitro, amino, or other nitrogen-containing functional group; thiol; alkylthio; sulphonyl; thiocyanate; isothiocyanate; azido; hydrazine; halogen; alkyl optionally having one or more ether or thioether linkages; alkoxy; alkenyl; hydroxyl; carbonyl; carboxyl; boronate; silyl; and substituted amino;~~

~~R'' is H or R';~~

~~any two or three of R, R' and R'' may optionally be joined together with the N to form a heterocyclic group, provided the heterocyclic group is not heteroaryl;~~

the anion is selected from the group consisting of nitrate, sulphate, phosphate, carbonate, sulphonate, and carboxylate, wherein the nitrate, sulphate, phosphate, carbonate, sulphonate, or carboxylate is selected from the group consisting of bis(trifluoromethylsulphonyl)imide, carbonate, hydrogen carbonate, sulphate, hydrogen sulphate, silicate, methanesulphonate, trifluoromethanesulphonate, ethylenediaminetetraacetate, hexafluorophosphate, tetrafluoroborate, trifluoroacetate, pentafluoropropanoate, heptafluorobutanoate, oxalate, formate, butanoate, pentanoate, hexanoate, heptanoate, octanoate, nonanoate, decanoate, benzoate, benezenedicarboxylate, benzenetricarboxylate, benzenetetracarboxylate, chlorobenzoate, fluorobenzoate, pentachlorobenzoate, pentafluorobenzoat, glycolate, pantothenate, mandelate, crotonate, malate, pyruvate, succinate, citrate and phenylacetate; and

the ionic liquid has a melting point below 25 ºC, a viscosity of less than 500 centipoise, and contains less than 1 % water~~; and~~

~~the ionic liquid is not diethanolammonium chloride~~.

Claim 33. (Currently amended): The ionic liquid of claim 32, wherein R' and R'' are different ~~and R'' is not H~~.

Claim 34. (Currently amended): The ionic liquid of claim 32, wherein R is a straight chain or branched alkyl group of 1 to 12 carbon atoms selected from the group consisting of methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, n-pentyl, n-hexyl, n-heptyl, and n-octyl ~~substituted with a moiety selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl~~.

Claim 35. (Currently canceled).

Claim 36. (Currently amended): The ionic liquid of claim 34 [[35]], wherein R is a hydroxyalkyl having 1, 2, 3, 4, 5 or 6 C atoms.

Claim 37. (Previously presented): The ionic liquid of claim 36, wherein the hydroxyalkyl has a hydroxyl moiety on its free, terminal carbon.

Claim 38. (Previously presented): The ionic liquid of claim 36, wherein R is a polyol having 2 to 6 C atoms.

Claim 39. (Previously presented): The ionic liquid of claim 38, wherein R is a diol, triol or tetra-ol.

Claim 40. (Currently amended): The ionic liquid of claim 32, wherein the cation is an ~~N-methylethanolammonium,~~ N,N-dimethylethanolammonium, ~~diethanolammonium,~~ N-alkyldiethanolammonium, ~~N,N-di(alkoxyalkyl)ammonium,~~ or triethanolammonium, ~~N-butyldiethanolammonium, N-(3-hydroxypropyl)putrescinium or N-(3-hydroxypropyl)-N-methylcyclohexylammonium~~ ion.

Claim 41. (Currently canceled).

Claim 42. (Currently amended): The ionic liquid of claim 40 [[41]], wherein the cation is an ~~N-methylethanolammonium,~~ N,N-dimethylethanolammonium, ~~N,N-di(methoxyethyl)ammonium~~ or N-butyldiethanolammonium ion.

Claim 43. (Currently amended): The ionic liquid of claim 32, wherein the anion is selected from the group consisting of bis(trifluoromethylsulphonyl)imide, formate, butanoate, pentanoate, hexanoate, heptanoate, octanoate, nonanoate, decanoate, glycolate, crotonate, pyruvate, succinate, and phenylacetate ~~R is an aminoalkyl having 2 to 8 C atoms~~.

Claims 44-53. (Currently canceled).

Claim 54. (Currently amended): The ionic liquid of claim 32, wherein the ionic liquid is selected from the group consisting of:

~~diethanolammonium bromide;~~
~~diethanolammonium iodide;~~
~~diethanolammonium formate;~~
~~diethanolammonium acetate;~~
~~diethanolammonium propanoate;~~
~~diethanolammonium propanedioate;~~
~~diethanolammonium butanoate;~~
~~diethanolammonium butenoate;~~
~~diethanolammonium butanedioate;~~
~~diethanolammonium pentanoate;~~
~~diethanolammonium pentanedioate;~~
~~diethanolammonium pentenoate;~~
~~diethanolammonium hexanoate;~~
~~diethanolammonium hexanedioate;~~
~~diethanolammonium hexenoate;~~
~~diethanolammonium heptanoate;~~
~~diethanolammonium heptanedioate;~~
~~diethanolammonium heptenoate;~~
~~diethanolammonium octanoate;~~
~~diethanolammonium octanedioate;~~
~~diethanolammonium octenoate;~~
~~diethanolammonium nonanoate;~~
~~diethanolammonium nonanedioate;~~
~~diethanolammonium nonenoate;~~
~~diethanolammonium decanoate;~~
~~diethanolammonium decanedioate;~~
~~diethanolammonium decenoate;~~

~~diethanolammonium undecanoate;~~

~~diethanolammonium undecanedioate;~~

~~diethanolammonium undecenoate;~~

~~diethanolammonium dodecanoate;~~

~~diethanolammonium dodecanedicarboxylate;~~

~~diethanolammonium dodecenecarboxylate;~~

~~diethanolammonium cyclohexanecarboxylate;~~

~~diethanolammonium cyclohexenecarboxylate;~~

~~diethanolammonium phenoxide;~~

~~diethanolammonium benzoate;~~

~~diethanolammonium benezenedicarboxylate;~~

~~diethanolammonium benzenetricarboxylate;~~

~~diethanolammonium benzenetetracarboxylate;~~

~~diethanolammonium chlorobenzoate;~~

~~diethanolammonium fluorobenzoate;~~

~~diethanolammonium pentachlorobenzoate;~~

~~diethanolammonium pentafluorobenzoate;~~

~~diethanolammonium salicylate;~~

~~diethanolammonium glycolate;~~

~~diethanolammonium lactate;~~

~~diethanolammonium pantothenate;~~

~~diethanolammonium tartrate;~~

~~diethanolammonium hydrogen tartrate;~~

~~diethanolammonium mandelate;~~

~~diethanolammonium crotonate;~~

~~diethanolammonium malate;~~

~~diethanolammonium pyruvate;~~

~~diethanolammonium succinate;~~

~~diethanolammonium citrate;~~

~~diethanolammonium fumarate;~~

~~diethanolammonium phenylacetate;~~

~~diethanolammonium oxalate;~~

~~diethanolammonium bis(trifluoromethylsulphonyl)imide;~~

~~diethanolammonium carbonate;~~

~~diethanolammonium hydrogen carbonate;~~

~~diethanolammonium phosphate;~~

~~diethanolammonium hydrogen phosphate;~~

~~diethanolammonium dihydrogen phosphate;~~

~~diethanolammonium methanesulphonate;~~

~~diethanolammonium trifluoromethanesulphonate;~~

~~diethanolammonium ethylenediaminetetraacetate;~~

~~diethanolammonium hexafluorophosphate;~~

~~diethanolammonium tetrafluoroborate;~~

~~diethanolammonium trifluoroacetate;~~

~~diethanolammonium pentafluoropropanoate;~~

~~diethanolammonium heptafluorobutanoate;~~

~~diethanolammonium phosphoenolpyruvate;~~

~~diethanolammonium nicotinamide adenine dinucleotide phosphate;~~

~~diethanolammonium adenosinephosphate;~~

~~diethanolammonium adenosine diphosphate;~~

~~diethanolammonium adenosine triphosphate;~~

~~diethanolammonium oxyniacate;~~

~~diethanolammonium nitrate;~~

~~diethanolammonium nitrite;~~

~~N-butyldiethanolammonium chloride;~~

~~N-butyldiethanolammonium bromide;~~

~~N-butyldiethanolammonium iodide;~~

N-butyldiethanolammonium formate;

~~N-butyldiethanolammonium acetate;~~

~~N-butyldiethanolammonium propanoate;~~

~~N-butyldiethanolammonium propanedioate;~~

N-butyldiethanolammonium butanoate;

~~N-butyldiethanolammonium butenoate;~~

~~N-butyldiethanolammonium butanedioate;~~

N-butyldiethanolammonium pentanoate;

~~N-butyldiethanolammonium pentanedioate;~~

~~N-butyldiethanolammonium pentenoate;~~

N-butyldiethanolammonium hexanoate;

~~N-butyldiethanolammonium hexenoate;~~

N-butyldiethanolammonium heptanoate;

~~N-butyldiethanolammonium heptanedioate;~~

~~N-butyldiethanolammonium heptenoate;~~

N-butyldiethanolammonium octanoate;

~~N-butyldiethanolammonium octanedioate;~~

~~N-butyldiethanolammonium octenoate;~~

N-butyldiethanolammonium nonanoate;

~~N-butyldiethanolammonium nonanedioate;~~

~~N-butyldiethanolammonium nonenoate;~~

N-butyldiethanolammonium decanoate;

~~N-butyldiethanolammonium decanedioate;~~

~~N-butyldiethanolammonium decenoate;~~

~~N-butyldiethanolammonium undecanoate;~~

~~N-butyldiethanolammonium undecanedioate;~~

~~N-butyldiethanolammonium undecenoate;~~

~~N-butyldiethanolammonium dodecanoate;~~

~~N-butyldiethanolammonium dodecanedicarboxylate;~~

~~N-butyldiethanolammonium dodecenecarboxylate;~~

~~N-butyldiethanolammonium cyclohexanecarboxylate;~~

~~N-butyldiethanolammonium cyclohexenecarboxylate;~~

~~N-butyldiethanolammonium phenoxide;~~

N-butyldiethanolammonium benzoate;

N-butyldiethanolammonium benezenedicarboxylate;

N-butyldiethanolammonium benzenetricarboxylate;

N-butyldiethanolammonium benzenetetracarboxylate;

N-butyldiethanolammonium chlorobenzoate;

N-butyldiethanolammonium fluorobenzoate;

N-butyldiethanolammonium pentachlorobenzoate;

N-butyldiethanolammonium pentafluorobenzoate;

~~N-butyldiethanolammonium salicylate;~~

N-butyldiethanolammonium glycolate;

~~N-butyldiethanolammonium lactate;~~

N-butyldiethanolammonium pantothenate;

~~N-butyldiethanolammonium tartrate;~~

~~N-butyldiethanolammonium hydrogen tartrate;~~

N-butyldiethanolammonium mandelate;

N-butyldiethanolammonium crotonate;

N-butyldiethanolammonium malate;

N-butyldiethanolammonium pyruvate;

N-butyldiethanolammonium succinate;

N-butyldiethanolammonium citrate;

~~N-butyldiethanolammonium fumarate;~~

N-butyldiethanolammonium phenylacetate;

N-butyldiethanolammonium oxalate;

N-butyldiethanolammonium bis(trifluoromethylsulphonyl)imide;

N-butyldiethanolammonium carbonate;

N-butyldiethanolammonium hydrogen carbonate;

N-butyldiethanolammonium sulphate;

N-butyldiethanolammonium hydrogen sulphate;

~~N-butyldiethanolammonium phosphate;~~

~~N-butyldiethanolammonium hydrogen phosphate;~~

~~N-butyldiethanolammonium dihydrogen phosphate;~~

N-butyldiethanolammonium methanesulphonate;

N-butyldiethanolammonium trifluoromethanesulphonate;

N-butyldiethanolammonium ethylenediaminetetraacetate;

N-butyldiethanolammonium hexafluorophosphate;

N-butyldiethanolammonium tetrafluoroborate;

N-butyldiethanolammonium trifluoroacetate;

N-butyldiethanolammonium pentafluoropropanoate;

N-butyldiethanolammonium heptafluorobutanoate;

~~N-butyldiethanolammonium phosphoenolpyruvate;~~

~~N-butyldiethanolammonium nicotinamide adenine dinucleotide phosphate;~~

~~N-butyldiethanolammonium adenosinephosphate;~~

~~N-butyldiethanolammonium adenosine diphosphate;~~

~~N-butyldiethanolammonium adenosine triphosphate;~~

~~N-butyldiethanolammonium oxyniacate;~~

~~N-butyldiethanolammonium nitrate;~~

~~N-butyldiethanolammonium nitrite;~~

~~N,N-dimethylethanolammonium bromide;~~

~~N,N-dimethylethanolammonium iodide;~~

N,N-dimethylethanolammonium formate;

~~N,N-dimethylethanolammonium acetate;~~

~~N,N-dimethylethanolammonium propanoate;~~

~~N,N-dimethylethanolammonium propanedioate;~~

N,N-dimethylethanolammonium butanoate;

~~N,N-dimethylethanolammonium butenoate;~~

~~N,N-dimethylethanolammonium butanedioate;~~

N,N-dimethylethanolammonium pentanoate;

~~N,N-dimethylethanolammonium pentanedioate;~~

~~N,N-dimethylethanolammonium pentenoate;~~

N,N-dimethylethanolammonium hexanoate;

~~N,N-dimethylethanolammonium hexenoate;~~

N,N-dimethylethanolammonium heptanoate;

~~N,N-dimethylethanolammonium heptanedioate;~~

~~N,N-dimethylethanolammonium heptenoate;~~

N,N-dimethylethanolammonium octanoate;

~~N,N-dimethylethanolammonium octanedioate;~~

~~N,N-dimethylethanolammonium octenoate;~~

N,N-dimethylethanolammonium nonanoate;

~~N,N-dimethylethanolammonium nonanedioate;~~

~~N,N-dimethylethanolammonium nonenoate;~~

N,N-dimethylethanolammonium decanoate;

~~N,N-dimethylethanolammonium decanedioate;~~

~~N,N-dimethylethanolammonium decenoate;~~

~~N,N-dimethylethanolammonium undecanoate;~~

~~N,N-dimethylethanolammonium undecanedioate;~~

~~N,N-dimethylethanolammonium undecenoate;~~

~~N,N-dimethylethanolammonium dodecanoate;~~

~~N,N-dimethylethanolammonium dodecanedicarboxylate;~~

~~N,N-dimethylethanolammonium dodecenecarboxylate;~~

~~N,N-dimethylethanolammonium cyclohexanecarboxylate;~~

~~N,N-dimethylethanolammonium cyclohexenecarboxylate;~~

~~N,N-dimethylethanolammonium phenoxide;~~

N,N-dimethylethanolammonium benzoate;

N,N-dimethylethanolammonium benezenedicarboxylate;

N,N-dimethylethanolammonium benzenetricarboxylate;

N,N-dimethylethanolammonium benzenetetracarboxylate;

N,N-dimethylethanolammonium chlorobenzoate;

N,N-dimethylethanolammonium fluorobenzoate;

N,N-dimethylethanolammonium pentachlorobenzoate;

N,N-dimethylethanolammonium pentafluorobenzoate;

~~N,N-dimethylethanolammonium salicylate;~~

N,N-dimethylethanolammonium glycolate;

~~N,N-dimethylethanolammonium lactate;~~

N,N-dimethylethanolammonium pantothenate;

~~N,N-dimethylethanolammonium tartrate;~~

~~N,N-dimethylethanolammonium hydrogen tartrate;~~

N,N-dimethylethanolammonium mandelate;

N,N-dimethylethanolammonium crotonate;

N,N-dimethylethanolammonium malate;

N,N-dimethylethanolammonium pyruvate;

N,N-dimethylethanolammonium succinate;

N,N-dimethylethanolammonium citrate;

~~N,N-dimethylethanolammonium fumarate;~~

N,N-dimethylethanolammonium phenylacetate;

N,N-dimethylethanolammonium oxalate;

N,N-dimethylethanolammonium bis(trifluoromethylsulphonyl)imide;

N,N-dimethylethanolammonium carbonate;

N,N-dimethylethanolammonium hydrogen carbonate;

N,N-dimethylethanolammonium sulphate;

N,N-dimethylethanolammonium hydrogen sulphate;

~~N,N-dimethylethanolammonium phosphate;~~

~~N,N-dimethylethanolammonium hydrogen phosphate;~~

~~N,N-dimethylethanolammonium dihydrogen phosphate;~~

N,N-dimethylethanolammonium methanesulphonate;

N,N-dimethylethanolammonium trifluoromethanesulphonate;

N,N-dimethylethanolammonium ethylenediaminetetraacetate;

N,N-dimethylethanolammonium hexafluorophosphate;

N,N-dimethylethanolammonium tetrafluoroborate;

N,N-dimethylethanolammonium trifluoroacetate;

N,N-dimethylethanolammonium pentafluoropropanoate; and

N,N-dimethylethanolammonium heptafluorobutanoate;

~~N,N-dimethylethanolammonium phosphoenolpyruvate;~~

~~N,N-dimethylethanolammonium nicotinamide adenine dinucleotide phosphate;~~

~~N,N-dimethylethanolammonium adenosinephosphate;~~

~~N,N-dimethylethanolammonium adenosine diphosphate;~~

~~N,N-dimethylethanolammonium adenosine triphosphate;~~

~~N,N-dimethylethanolammonium oxyniacate;~~

~~N,N-dimethylethanolammonium nitrate;~~

~~N,N-dimethylethanolammonium nitrite;~~

~~N-methylethanolammonium bromide;~~

~~N-methylethanolammonium iodide;~~

~~N-methylethanolammonium formate;~~

~~N-methylethanolammonium acetate;~~

~~N-methylethanolammonium propanoate;~~

~~N-methylethanolammonium propanedioate;~~

~~N-methylethanolammonium butanoate;~~

~~N-methylethanolammonium butenoate;~~

~~N-methylethanolammonium butanedioate;~~

~~N-methylethanolammonium pentanoate;~~

~~N-methylethanolammonium pentanedioate;~~

~~N-methylethanolammonium pentenoate;~~

~~N-methylethanolammonium hexanoate;~~

~~N-methylethanolammonium hexenoate;~~

~~N-methylethanolammonium heptanoate;~~

~~N-methylethanolammonium heptanedioate;~~

~~N-methylethanolammonium heptenoate;~~

~~N-methylethanolammonium octanoate;~~

~~N-methylethanolammonium octanedioate;~~

~~N-methylethanolammonium octenoate;~~

~~N-methylethanolammonium nonanoate;~~

~~N-methylethanolammonium nonanedioate;~~

~~N-methylethanolammonium nonenoate;~~

~~N-methylethanolammonium decanoate;~~

~~N-methylethanolammonium decanedioate;~~

~~N-methylethanolammonium decenoate;~~

~~N-methylethanolammonium undecanoate;~~

~~N-methylethanolammonium undecanedioate;~~

~~N-methylethanolammonium undecenoate;~~

~~N-methylethanolammonium dodecanoate;~~

~~N-methylethanolammonium dodecanedicarboxylate;~~

~~N-methylethanolammonium dodecenecarboxylate;~~

~~N-methylethanolammonium cyclohexanecarboxylate;~~

~~N-methylethanolammonium cyclohexenecarboxylate;~~

~~N-methylethanolammonium phenoxide;~~

~~N-methylethanolammonium benzoate;~~

~~N-methylethanolammonium benezenedicarboxylate;~~

~~N-methylethanolammonium benzenetricarboxylate;~~

~~N-methylethanolammonium benzenetetracarboxylate;~~

~~N-methylethanolammonium chlorobenzoate;~~

~~N-methylethanolammonium fluorobenzoate;~~

~~N-methylethanolammonium pentachlorobenzoate;~~

~~N-methylethanolammonium pentafluorobenzoate;~~

~~N-methylethanolammonium salicylate;~~

~~N-methylethanolammonium glycolate;~~

~~N-methylethanolammonium lactate;~~

~~N-methylethanolammonium pantothenate;~~

~~N-methylethanolammonium tartrate;~~

~~N-methylethanolammonium hydrogen tartrate;~~

~~N-methylethanolammonium mandelate;~~

~~N-methylethanolammonium crotonate;~~

~~N-methylethanolammonium malate;~~

~~N-methylethanolammonium pyruvate;~~

~~N-methylethanolammonium succinate;~~

~~N-methylethanolammonium citrate;~~

~~N-methylethanolammonium fumarate;~~

~~N-methylethanolammonium phenylacetate;~~

~~N-methylethanolammonium oxalate;~~

~~N-methylethanolammonium bis(trifluoromethylsulphonyl)imide;~~

~~N-methylethanolammonium carbonate;~~

~~N-methylethanolammonium hydrogen carbonate;~~

~~N-methylethanolammonium sulphate;~~

~~N-methylethanolammonium hydrogen sulphate;~~

~~N-methylethanolammonium phosphate;~~

~~N-methylethanolammonium hydrogen phosphate;~~

~~N-methylethanolammonium dihydrogen phosphate;~~

~~N-methylethanolammonium methanesulphonate;~~

~~N-methylethanolammonium trifluoromethanesulphonate;~~

~~N-methylethanolammonium ethylenediaminetetraacetate;~~

~~N-methylethanolammonium hexafluorophosphate;~~

~~N-methylethanolammonium tetrafluoroborate;~~

~~N-methylethanolammonium trifluoroacetate;~~

~~N-methylethanolammonium pentafluoropropanoate;~~

~~N-methylethanolammonium heptafluorobutanoate;~~

~~N-methylethanolammonium phosphoenolpyruvate;~~

~~N-methylethanolammonium nicotinamide adenine dinucleotide phosphate;~~

~~N-methylethanolammonium adenosinephosphate;~~

~~N-methylethanolammonium adenosine diphosphate;~~

~~N-methylethanolammonium adenosine triphosphate;~~

~~N-methylethanolammonium oxyniacate;~~

~~N-methylethanolammonium nitrate;~~

~~N-methylethanolammonium nitrite;~~

~~N,N-di(methoxyethyl)ammonium chloride;~~

~~N,N-di(methoxyethyl)ammonium bromide;~~

~~N,N-di(methoxyethyl)ammonium iodide;~~

~~N,N-di(methoxyethyl)ammonium formate;~~

~~N,N-di(methoxyethyl)ammonium acetate;~~

~~N,N-di(methoxyethyl)ammonium propanoate;~~

~~N,N-di(methoxyethyl)ammonium propanedioate;~~

~~N,N-di(methoxyethyl)ammonium butanoate;~~

~~N,N-di(methoxyethyl)ammonium butenoate;~~

~~N,N-di(methoxyethyl)ammonium butanedioate;~~

~~N,N-di(methoxyethyl)ammonium pentanoate;~~

~~N,N-di(methoxyethyl)ammonium pentanedioate;~~

~~N,N-di(methoxyethyl)ammonium pentenoate;~~

~~N,N-di(methoxyethyl)ammonium hexanoate;~~

~~N,N-di(methoxyethyl)ammonium hexenoate;~~

~~N,N-di(methoxyethyl)ammonium heptanoate;~~

~~N,N-di(methoxyethyl)ammonium heptanedioate;~~

~~N,N-di(methoxyethyl)ammonium heptenoate;~~

~~N,N-di(methoxyethyl)ammonium octanoate;~~

~~N,N-di(methoxyethyl)ammonium octanedioate;~~

~~N,N-di(methoxyethyl)ammonium octenoate;~~

~~N,N-di(methoxyethyl)ammonium nonanoate;~~

~~N,N-di(methoxyethyl)ammonium nonanedioate;~~

~~N,N-di(methoxyethyl)ammonium nonenoate;~~

~~N,N-di(methoxyethyl)ammonium decanoate;~~

~~N,N-di(methoxyethyl)ammonium decanedioate;~~

~~N,N-di(methoxyethyl)ammonium decenoate;~~

~~N,N-di(methoxyethyl)ammonium undecanoate;~~

~~N,N-di(methoxyethyl)ammonium undecanedioate;~~

~~N,N-di(methoxyethyl)ammonium undecenoate;~~

~~N,N-di(methoxyethyl)ammonium dodecanoate;~~

~~N,N-di(methoxyethyl)ammonium dodecanedicarboxylate;~~

~~N,N-di(methoxyethyl)ammonium dodecenecarboxylate;~~

~~N,N-di(methoxyethyl)ammonium cyclohexanecarboxylate;~~

~~N,N-di(methoxyethyl)ammonium cyclohexenecarboxylate;~~

~~N,N-di(methoxyethyl)ammonium phenoxide;~~

~~N,N-di(methoxyethyl)ammonium benzoate;~~

~~N,N-di(methoxyethyl)ammonium benezenedicarboxylate;~~

~~N,N-di(methoxyethyl)ammonium benzenetricarboxylate;~~

~~N,N-di(methoxyethyl)ammonium benzenetetracarboxylate;~~

~~N,N-di(methoxyethyl)ammonium chlorobenzoate;~~

~~N,N-di(methoxyethyl)ammonium fluorobenzoate;~~

~~N,N-di(methoxyethyl)ammonium pentachlorobenzoate;~~

~~N,N-di(methoxyethyl)ammonium pentafluorobenzoate;~~

~~N,N-di(methoxyethyl)ammonium salicylate;~~

~~N,N-di(methoxyethyl)ammonium glycolate;~~

~~N,N-di(methoxyethyl)ammonium lactate;~~

~~N,N-di(methoxyethyl)ammonium pantothenate;~~

~~N,N-di(methoxyethyl)ammonium tartrate;~~

~~N,N-di(methoxyethyl)ammonium hydrogen tartrate;~~

~~N,N-di(methoxyethyl)ammonium mandelate;~~

~~N,N-di(methoxyethyl)ammonium crotonate;~~

~~N,N-di(methoxyethyl)ammonium malate;~~

~~N,N-di(methoxyethyl)ammonium pyruvate;~~

~~N,N-di(methoxyethyl)ammonium succinate;~~

~~N,N-di(methoxyethyl)ammonium citrate;~~

~~N,N-di(methoxyethyl)ammonium fumarate;~~

~~N,N-di(methoxyethyl)ammonium phenylacetate;~~

~~N,N-di(methoxyethyl)ammonium oxalate;~~

~~N,N-di(methoxyethyl)ammonium bis(trifluoromethylsulphonyl)imide;~~

~~N,N-di(methoxyethyl)ammonium carbonate;~~

~~N,N-di(methoxyethyl)ammonium hydrogen carbonate;~~

~~N,N-di(methoxyethyl)ammonium sulphate;~~

~~N,N-di(methoxyethyl)ammonium hydrogen sulphate;~~

~~N,N-di(methoxyethyl)ammonium phosphate;~~

~~N,N-di(methoxyethyl)ammonium hydrogen phosphate;~~

~~N,N-di(methoxyethyl)ammonium dihydrogen phosphate;~~

~~N,N-di(methoxyethyl)ammonium methanesulphonate;~~

~~N,N-di(methoxyethyl)ammonium trifluoromethanesulphonate;~~

~~N,N-di(methoxyethyl)ammonium ethylenediaminetetraacetate;~~

~~N,N-di(methoxyethyl)ammonium hexafluorophosphate;~~

~~N,N-di(methoxyethyl)ammonium tetrafluoroborate;~~

~~N,N-di(methoxyethyl)ammonium trifluoroacetate;~~

~~N,N-di(methoxyethyl)ammonium pentafluoropropanoate;~~

~~N,N-di(methoxyethyl)ammonium heptafluorobutanoate;~~

~~N,N-di(methoxyethyl)ammonium phosphoenolpyruvate;~~

~~N,N-di(methoxyethyl)ammonium nicotinamide adenine dinucleotide phosphate;~~

~~N,N-di(methoxyethyl)ammonium adenosinephosphate;~~

~~N,N-di(methoxyethyl)ammonium adenosine diphosphate;~~

~~N,N-di(methoxyethyl)ammonium adenosine triphosphate;~~

~~N,N-di(methoxyethyl)ammonium oxyniacate;~~

~~N,N-di(methoxyethyl)ammonium nitrate;~~

~~N,N-di(methoxyethyl)ammonium nitrite1-(3-Hydroxypropyl)putrescinium chloride;~~

~~N-(3-hydroxypropyl)putrescinium bromide;~~

~~N-(3-hydroxypropyl)putrescinium iodide;~~

~~N-(3-hydroxypropyl)putrescinium formate;~~

~~N-(3-hydroxypropyl)putrescinium acetate;~~

~~N-(3-hydroxypropyl)putrescinium propanoate;~~

~~N-(3-hydroxypropyl)putrescinium propanedioate;~~

~~N-(3-hydroxypropyl)putrescinium butanoate;~~

~~N-(3-hydroxypropyl)putrescinium butenoate;~~

~~N-(3-hydroxypropyl)putrescinium butanedioate;~~

~~N-(3-hydroxypropyl)putrescinium pentanoate;~~

~~N-(3-hydroxypropyl)putrescinium pentanedioate;~~

~~N-(3-hydroxypropyl)putrescinium pentenoate;~~

~~N-(3-hydroxypropyl)putrescinium hexanoate;~~

~~N-(3-hydroxypropyl)putrescinium hexenoate;~~

~~N-(3-hydroxypropyl)putrescinium heptanoate;~~

~~N-(3-hydroxypropyl)putrescinium heptanedioate;~~

~~N-(3-hydroxypropyl)putrescinium heptenoate;~~

~~N-(3-hydroxypropyl)putrescinium octanoate;~~

~~N-(3-hydroxypropyl)putrescinium octanedioate;~~

~~N-(3-hydroxypropyl)putrescinium octenoate;~~

~~N-(3-hydroxypropyl)putrescinium nonanoate;~~

~~N-(3-hydroxypropyl)putrescinium nonanedioate;~~

~~N-(3-hydroxypropyl)putrescinium nonenoate;~~

~~N-(3-hydroxypropyl)putrescinium decanoate;~~

~~N-(3-hydroxypropyl)putrescinium decanedioate;~~

~~N-(3-hydroxypropyl)putrescinium decenoate;~~

~~N-(3-hydroxypropyl)putrescinium undecanoate;~~

~~N-(3-hydroxypropyl)putrescinium undecanedioate;~~

~~N-(3-hydroxypropyl)putrescinium undecenoate;~~

~~N-(3-hydroxypropyl)putrescinium dodecanoate;~~

~~N-(3-hydroxypropyl)putrescinium dodecanedicarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium dodecenecarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium cyclohexanecarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium cyclohexenecarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium phenoxide;~~

~~N-(3-hydroxypropyl)putrescinium benzoate;~~

~~N-(3-hydroxypropyl)putrescinium benezenedicarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium benzenetricarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium benzenetetracarboxylate;~~

~~N-(3-hydroxypropyl)putrescinium chlorobenzoate;~~

~~N-(3-hydroxypropyl)putrescinium fluorobenzoate;~~

~~N-(3-hydroxypropyl)putrescinium pentachlorobenzoate;~~

~~N-(3-hydroxypropyl)putrescinium pentafluorobenzoate;~~

~~N-(3-hydroxypropyl)putrescinium salicylate;~~

~~N-(3-hydroxypropyl)putrescinium glycolate;~~

~~N-(3-hydroxypropyl)putrescinium lactate;~~

~~N-(3-hydroxypropyl)putrescinium pantothenate;~~

~~N-(3-hydroxypropyl)putrescinium tartrate;~~

~~N-(3-hydroxypropyl)putrescinium hydrogen tartrate;~~

~~N-(3-hydroxypropyl)putrescinium mandelate;~~

~~N-(3-hydroxypropyl)putrescinium crotonate;~~

~~N-(3-hydroxypropyl)putrescinium malate;~~

~~N-(3-hydroxypropyl)putrescinium pyruvate;~~

~~N-(3-hydroxypropyl)putrescinium succinate;~~

~~N-(3-hydroxypropyl)putrescinium citrate;~~

~~N-(3-hydroxypropyl)putrescinium fumarate;~~

~~N-(3-hydroxypropyl)putrescinium phenylacetate;~~

~~N-(3-hydroxypropyl)putrescinium oxalate;~~

~~N-(3-hydroxypropyl)putrescinium bis(trifluoromethylsulphonyl)imide;~~

~~N-(3-hydroxypropyl)putrescinium methanesulphonate;~~

~~N-(3-hydroxypropyl)putrescinium trifluoromethanesulphonate;~~

~~N-(3-hydroxypropyl)putrescinium hexafluorophosphate;~~

~~N-(3-hydroxypropyl)putrescinium tetrafluoroborate;~~

~~N-(3-hydroxypropyl)putrescinium trifluoroacetate;~~

~~N-(3-hydroxypropyl)putrescinium pentafluoropropanoate;~~

~~N-(3-hydroxypropyl)putrescinium heptafluorobutanoate;~~

~~N-(3-hydroxypropyl)putrescinium phosphoenolpyruvate;~~
~~N-(3-hydroxypropyl)putrescinium nicotinamide adenine dinucleotide phosphate;~~
~~N-(3-hydroxypropyl)putrescinium adenosinephosphate;~~
~~N-(3-hydroxypropyl)putrescinium adenosine diphosphate;~~
~~N-(3-hydroxypropyl)putrescinium adenosine triphosphate;~~
~~N-(3-hydroxypropyl)putrescinium carbonate;~~
~~N-(3-hydroxypropyl)putrescinium hydrogen carbonate;~~
~~N-(3-hydroxypropyl)putrescinium sulphate;~~
~~N-(3-hydroxypropyl)putrescinium hydrogen sulphate;~~
~~N-(3-hydroxypropyl)putrescinium phosphate;~~
~~N-(3-hydroxypropyl)putrescinium hydrogen phosphate;~~
~~N-(3-hydroxypropyl)putrescinium dihydrogen phosphate;~~
~~N-(3-hydroxypropyl)putrescinium nitrate; and~~
~~N-(3-hydroxypropyl)putrescinium nitrite~~.

Claim 55. (Currently amended): A process for the preparation of an ionic liquid of claim 32, the process comprising the steps of:

i.) providing an organic ~~secondary or~~ tertiary amine; and

ii.) neutralizing the compound in (i) with an acid.

Claim 56. (Currently amended): The process of claim 55, wherein the acid includes an anion <u>selected from the group consisting of</u> ~~comprising a halogenated inorganic anion,~~ nitrate, sulphate, carbonate, sulphonate<u>, and</u> [[or]] carboxylate.

Claim 57. (Previously presented): A method for using the ionic liquid of claim 32 in an application selected from the group consisting of a solvent for enzyme-catalyzed reactions, a solvent for organic synthesis, a matrix in matrix-assisted laser desorption/ionisation (MALDI) mass spectrometry, a solvent for extraction, catalysis or liquefaction, a nuclear fuel reprocessing medium, a fuel cell additive, an electrochemical

application, pervaporation, drug delivery, lubrication, hydraulics, adhesives, sensors, biocides, and chromatographic media.

Claim 58. (Currently amended): A method for carrying out an enzyme-catalyzed reaction comprising:

i.) providing a liquid reaction medium which contains an ionic liquid comprising an anion and a cation wherein the cation is a ~~primary, secondary or~~ tertiary ammonium ion of the formula (I)

$$N^{+}HRR'R'' \qquad (I)$$

wherein:

R is an alkyl group substituted with one or more hydroxy groups ~~a hydrocarbyl substituted with one or more substituents selected from the group consisting of nitrile, nitro, amino, or other nitrogen-containing functional group; thiol; alkylthio; sulphonyl; thiocyanate; isothiocyanate; azido; hydrazine; halogen; alkyl optionally having one or more ether or thioether linkages; alkoxy; alkenyl; hydroxyl; carbonyl; carboxyl; boronate; silyl; and substituted amino~~;

R' and R" are independently alkyl or substituted alkyl groups optionally substituted with one or more substituents selected from the group consisting of a nitrogen-containing functional group, an alkoxy group, and a hydroxy group; the nitrogen-containing functional group selected from the group consisting of nitrile, nitro, and amino; the substituted alkyl comprising one or more ether linkages; and

~~R' and R'', which may be the same or different, are H or a hydrocarbyl optionally substituted with one or more substituents selected from the group consisting of nitrile, nitro, amino, or other nitrogen-containing functional group; thiol; alkylthio; sulphonyl; thiocyanate; isothiocyanate; azido; hydrazine; halogen; alkyl optionally having one or more ether or thioether linkages; alkoxy; alkenyl; hydroxyl; carbonyl; carboxyl; boronate; silyl; and substituted amino; and~~

~~any two or three of R, R' and R'' may be joined together with the N to form a heterocyclic (excluding heteroaryl) group;~~

the anion is selected from the group consisting of a nitrate, sulphate, phosphate, carbonate, sulphonate, and carboxylate;

ii.) providing in the liquid reaction medium an enzyme and a substrate for the enzyme; and

iii.) allowing reaction of the substrate to occur.

Claim 59. (Previously presented): The method of claim 58, wherein the ionic liquid is the ionic liquid of claim 32.

Claim 60. (Previously presented): The method of claim 58, wherein the ionic liquid is the ionic liquid of claim 40.

Claim 61. (Previously presented): The method of claim 58, wherein the ionic liquid is the ionic liquid of claim 54.